Small Business Innovation Research/Small Business Tech Transfer

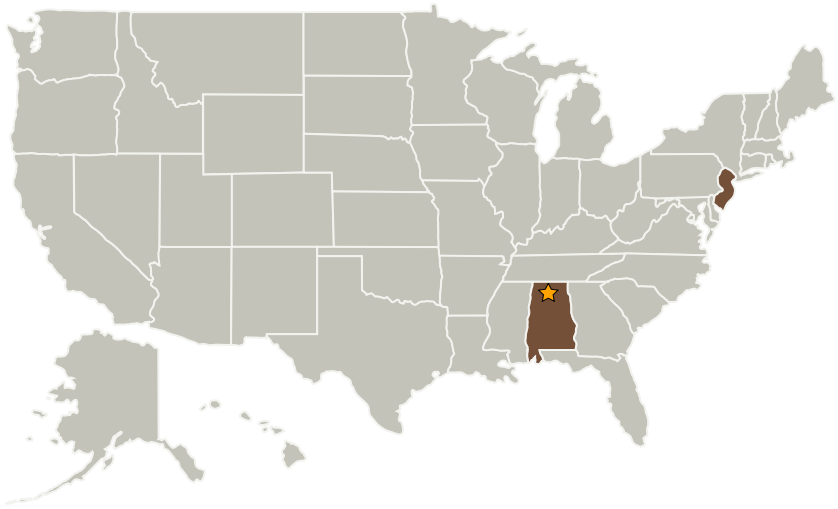
Silicon Germanium Alloy Photovoltaics for 1.06 Micron Wireless Power Transmission, Phase I

Completed Technology Project (2005 - 2005)

Project Introduction

In this Phase I SBIR effort, Structured Materials Industries, Inc. (SMI)will design, fabricate, and test more efficient photovoltaics for 1.06 micron wavelength wireless power transmission (WPT) systems. The need for such photovoltaics is well understood by SMI and builds upon our exiting WPT efforts, which have highlighted the requirement for efficient, cost-effective, and thin-able photovoltaics with a peak absorption matched to the output of available high power Nd:YAG lasers at 1.06 microns. The proposed work will address this need by developing SiGe photocells to help enable WPT implementation for both ground based and space based applications.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Marshall Space Flight Center(MSFC)	Lead Organization	NASA Center	Huntsville, Alabama
Structured Materials Industries, Inc.	Supporting Organization	Industry	Piscataway, New Jersey

Primary U.S. Work Locations	
Alabama	New Jersey

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Marshall Space Flight Center (MSFC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Brent Hoerman

Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.5 Lasers